

IN THE SPECIFICATION

Please replace the paragraph at page 1, prenumbered lines 21-24, with the following rewritten paragraph:

As a document proposed based on this specification, an ~~on-demand~~ on-demand channel assignment method for uplink is proposed by R1-030067 "AH64: Reducing control channel overhead for Enhanced Uplink" (referred to as nonpatent reference 1 from here on).

Please replace the paragraph at page 8, prenumbered lines 22-24, with the following rewritten paragraph:

Fig. 17 is a diagram showing a principle-of-operation timing chart of a parallel retransmission method which is an ~~on-demand~~ on-demand type channel assignment method;

Please replace the paragraph at page 8, prenumbered lines 25-27, with the following rewritten paragraph:

Fig. 18 is a diagram showing the internal structure of a transmission buffer of the mobile station according to embodiment [[3]] 4 of the present invention;

Please replace the paragraph beginning at page 8, prenumbered line 28, to page 9, prenumbered line 2, with the following rewritten paragraph:

Fig. 19 is a diagram showing a principle-of-operation timing chart of a parallel retransmission method which is an ~~on-demand~~ on-demand type channel assignment method, and is a diagram for especially explaining setting of a residual priority and the transmission operation to the base station; and

Please replace the paragraph at page 9, prenumbered lines 3-7, with the following rewritten paragraph:

Fig. 20 is a diagram showing a principle-of-operation timing chart of a parallel retransmission method which is an ~~on-demand~~ on-demand type channel assignment method, and is a diagram for especially explaining setting of a residual priority and the transmission operation to the base station.

Please replace the paragraph at page 14, prenumbered lines 13-22, with the following rewritten paragraph:

The packet transmission control unit (Packet TX Control) 403 includes the modulation control unit (TFRI Control) 404 and priority control unit (Priority Control) 405, extracts the transmission timing (TX timing) with which the mobile station transmits data to the base station 103 from both the result of determination of reception (ASK/NACK) which is inputted from a below-mentioned demultiplexing unit (~~DEMIX~~) (DEMUX) 411, and scheduling instruction information (Scheduling Assignment) from the base station 103, and delivers the transmission timing to the transmission buffer (TX buffer) 402.

Please replace the paragraph beginning at page 14, prenumbered line 23, to page 15, prenumbered line 3, with the following rewritten paragraph:

The packet transmission control unit (Packet TX Control) 403 also recognizes the packet data recorded in the transmission buffer (TX buffer) 402 from the priority (Priority), data size, etc., and controls which packet data the mobile station should transmit to the base station and controls whether the mobile station should transmit all or some of the packet data to the base station. At this time, the packet transmission control unit (Packet TX Control) 403 also uses the scheduling instruction information (Scheduling Assignment) and result of

determination of reception (~~ASK/NACK~~) (ACK/NACK) transmitted from the base station 103.

Please replace the paragraph at page 15, prenumbered lines 4-15, with the following rewritten paragraph:

The modulation control unit (TFRI Control) 404 determines the type of modulation for transmission of packet data to the base station 103 based on both the transmission data size (Queue size) inputted from the transmission buffer (TX buffer) 402, and the scheduling instruction information (Scheduling Assignment) inputted from the demultiplexing unit (~~DEMIX~~) (DEMUX) 411, and delivers this type of modulation, as the type-of-modulation information (TRFI), to a transmission power control unit (Power Control) 406 and the multiplexing unit (MUX) 407. Furthermore, the modulation control unit (TFRI Control) 404 delivers the data size (Queue size) inputted from the transmission buffer (TX buffer) 402 to the multiplexing unit (MUX) 407.

Please replace the paragraph at page 18, prenumbered lines 9-30, with the following rewritten paragraph:

The demultiplexing unit (DEMUX) 504 demultiplexes the baseband signals into which the various radio frequency signals sent out onto the uplink channel (USICCH) 106 for transmission request, uplink type-of-modulation information channel (UTCCH) 108, and uplink channel (EUDCH) 109 for data transmission are converted by the receiving unit by using a known technique, and extracts received data and various pieces of information from the channels and outputs them to a receive buffer (RX buffer) 505 and a transmission scheduler (Scheduler) 506. In other words, the demultiplexing unit (DEMUX) 504 extracts the size information on the size of packet data (Queue Size), residual priority information

(Residual priority) and transmission power margin information (Power margin) from the channel (USICCH) 106 for transmission request, and outputs them to the transmission scheduler (Scheduler) 506. Furthermore, the demultiplexing unit (DEMUX) 504 extracts information indicating the type of modulation (TFRI) from the type-of-modulation information channel (UTCCH) 108, and demodulates the transmitted data using this type of modulation (TFRI) so as to extract the transmitted data itself from the channel (EUDCH) 109 for data transmission and outputs the received data to a receive buffer (RX buffer) [[507]] 505.

Please replace the paragraph at page 33, prenumbered lines 26-28, with the following rewritten paragraph:

Subsequent processes are carried out in the same way as explained in [[()]]the case ~~where the transmission of the first transmission of packet data is not the first one~~.

Please replace the paragraph beginning at page 41, prenumbered line 28, to page 42, prenumbered line 1, with the following rewritten paragraph:

Instead of the average of the priorities (Priority) of packet data, the priority control unit can define the weighted mean average of the sum of the priorities (Priority) and the amount of data as the residual priority.

Please replace the paragraph at page 42, prenumbered lines 2-11, with the following rewritten paragraph:

In the case where the residual priority is determined in this way, when two or more packet data to be transmitted are multiplexed, since the base station 103 can schedule a transmission timing at which it uses for communications with the mobile station 102 based on

either the average of the priorities (Priority) of the multiplexed packet data to be transmitted or the average of the weighted mean average of the sum of the priorities (Priority) and the amount of data, the base station 103 can set the residual priority which is optimized for all the packet data stored in the transmission buffer 402.

Please replace the paragraph at page 45, prenumbered lines 12-15, with the following rewritten paragraph:

Fig. 13 is a diagram showing the transmission procedure for transmitting packet data between the mobile station and the base station in accordance with embodiment [[1]] 2 of the present invention.

Please replace the paragraph at page 53, prenumbered lines 12-16, with the following rewritten paragraph:

In accordance with the related art W-CDMA technology, the exchange of signals between the base station 103 and the base station controller (RNC) 104 is called [[Sub]] Iub signaling, and the exchange of signals between the base station controller (RNC) and the mobile station (UE) is called RRC signaling.

Please replace the paragraph beginning at page 53, prenumbered line 29, to page 54, prenumbered line 5, with the following rewritten paragraph:

Embodiment 4 relates to an ~~on-demand~~ on-demand type channel assignment method for time-dividing the timing of transmission and reception periodically, and performing retransmission processing independently for each division, which is suitable for a parallel retransmission method (N channel Stop and Wait). N is the number of sections into which the timing of transmission and reception is divided.

Please replace the paragraph at page 54, prenumbered lines 6-11, with the following rewritten paragraph:

Fig. 17 is a diagram showing a principle-of-operation timing chart of the parallel retransmission method which is the ~~on-demand~~ on-demand type channel assignment method. In Fig. 17, a subframe time length is set to 2ms, and the number N of sections into which the timing of transmission and reception is divided to is set to 5.

Please replace the paragraph at page 56, prenumbered lines 17-19, with the following rewritten paragraph:

Fig. 18 is a diagram showing the internal structure of a transmission buffer of the mobile station in accordance with embodiment [[3]] 4 of the present invention.

Please replace the paragraph beginning at page 58, prenumbered line 30, to page 59, prenumbered line 3, with the following rewritten paragraph:

Next, the setting of the residual priority (Residual Priority) and the transmission operation to the base station 103 in accordance with embodiment [[3]] 4 of the present invention will be explained.

Please replace the paragraph at page 59, prenumbered lines 4-8, with the following rewritten paragraph:

Fig. 19 is a diagram showing a principle-of-operation timing chart of a parallel retransmission method which is an ~~on-demand~~ on-demand type channel assignment method, and is a diagram for especially explaining the setting of the residual priority and the transmission operation to the base station.

Please replace the paragraph at page 63, prenumbered lines 20-25, with the following rewritten paragraph:

Then, since the reception determination result for the first transmission of the packet data of priority of 2 is ACK, ~~[[REQ1]]~~ REQ2 for retransmission in the second cycle is not transmitted. Furthermore, since the packet data (DATA2) of priority of 2 is correctly received by the base station 103, the packet data of priority 2 is deleted from the memories for retransmission.

Please replace the paragraph at page 65, prenumbered lines 7-8, with the following rewritten paragraph:

Another example of embodiment ~~[[3]]~~ 4 of the present invention will be explained hereafter.

Please replace the paragraph at page 65, prenumbered lines 9-13, with the following rewritten paragraph:

Fig. 20 is a diagram showing a principle-of-operation timing chart of a parallel retransmission method which is an ~~on-demand~~ on-demand type channel assignment method, and is a diagram for especially explaining the setting of the residual priority and the transmission operation to the base station.

Please replace the paragraph at page 68, prenumbered lines 2-15, with the following rewritten paragraph:

As previously mentioned, since the ~~transmission scheduler of the base station~~ high value setting of residual priorities continues the processing for a long time at the time of the

first transmission of packet data transmission from a mobile station and nearly at the time of transmission of packet data from a mobile station after the transmission buffer of the mobile station becomes empty, the base station can generate a schedule such as a transmission timing at which the base station communicates with the mobile station by taking into consideration both mobile stations having packet data with high priority and other mobile stations having a large amount of packet data, and can carry out the schedule generating operation optimally. As a result, the communications system can improve the efficiency of use of radio resources.

Please cancel the original Abstract at page 75, lines 1-25 in its entirety and insert therefor the following replacement Abstract on a separate sheet as follows: